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ERICSSON INC. 6300 LEGACY DRIVE M/S EVR 1-C-11 PLANO, TX 75024			CEHIC, KENAN	
			ART UNIT	PAPER NUMBER
			2473	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kara.coffman@ericsson.com  
jennifer.hardin@ericsson.com  
melissa.rhea@ericsson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/531,020	<b>Applicant(s)</b> CHEMIAKINA ET AL.	
	<b>Examiner</b> KENAN CEHIC	<b>Art Unit</b> 2473	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11/15/2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-41 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 15-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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1. Claims 1-4, 8, 9,11, 12, 15-18, 22,23, 25, 26, 28-32, 36, 37, 39, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiner (EP0948168) in view of Turina et al (US 2005/0054348) and Jenq (US 2003/0063560)

For claim 1, Reiner discloses a method for controlling (see section 0036 lines 2-6 “sliding window flow control....is calculated” and see Figure 1, st10-st30 and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) transmission (see section 0004 line 1 “transmission of data”) of data bits (see section 0030 section 0005 lines 1-8 “bytes”) in a bit transfer (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) for transmitting data information (see section 0004 line 1 “transmission of data”) from an application server (see section 0052 lines 4-7 “server”) to a client (see section 0052 lines 4-7 “personal computer” and section 0043 lines 1-7 “personal computer”), said bit transfer (see section 0015 lines 1-4 “data flow...stream oriented”) session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange

connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) involving bit transfer (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) over a wireless communications link (see section 0043 lines 1-10 “access link...Radio Link Protocol...GSM” and section 0044 lines 5-8 “radio...cellular telephone”) by means of a transport protocol (see section 0047 lines 5-10 “TCP”) with a flow control mechanism (see section 0047 lines 5-10 “TCP...flow control”), the method (Figure 1, st10-st30) comprising the steps of:

a network entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) receiving (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”), continuously (see section 0035 lines 1-6 “bandwidth value...determined...several times” and section 0097 lines 1-22 “...over intervals” and section 0076 “periodically”) throughout said session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”), information (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0042 lines 1-12 “available bandwidth value of the access link” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding

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window based flow control ...determining a window value from ...bandwidth values...) from a network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender") about the bandwidth (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link"; see section 0054 "physical bandwidth value ...bandwidth momentarily available to the connection at that link") on the **entire** wireless link (section 0042 lines 1-12 "available bandwidth value of the access link" and section 0043 lines 1-10 "access link....Radio Link Protocol...GSM") that the bit transfer session (see section 0041 lines 5-11 " packet exchange connection at said link") currently is allowed to use (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0060 lines 1-11 "bandwidth value...bandwidth currently available...to the connection"; see section 0054 "physical bandwidth value ...bandwidth momentarily available to the connection at that link"), where the network entity (see section 0054 lines 1-14 "bandwidth values...to the receiver...to the sender") is separate from the network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender") and comprises at least one of the application server and the client (see section 0052 lines 4-7 "server...computer"); and

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the router determines the bandwidth said bit transfer session is allowed to use over the wireless link (see section 0019, 0054; next router from wireless device determines the available bandwidth); and

said network entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0057 lines 1-11 “incorporated ...in one or both of the partners”) updating at least one parameter (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...”)) relating to the flow control mechanism (see section 0036 lines 1-7 through section 0037 “window size...control window” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...”)) of the transport protocol (see section 0037 lines 1-8 “window size ....TCP” and section 0047 lines 1-13 “TCP...flow control...bottleneck window.. congestion window...advertised window”) in response to said received information (see section 0036 lines 1-7 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...”)), so as to control the transmission rate (see section 0055 lines 1-11 “sender...automatically taking into account...bandwidth

values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) of the session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider” and section 0057 lines 1-11 “partners in the connection”) in accordance with said received (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) information (see section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”).

For claim 2, Reiner discloses receiving said information (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0042 lines 1-12 “available bandwidth value of the access link” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” from a radio (see section 0043 lines 1-10 “access link...Radio Link Protocol...GSM” and section 0044 lines 5-8 “radio...cellular telephone”) the network node (see section 0054 lines 1-20 “router... sender...receiver...” and section 0055 lines 1-11 “sender”



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and section 0057 "one or both partners" and section 0043 lines 1-16 "bandwidth of access link is provided by component ...controls link layer")) each time the bandwidth on the wireless link (section 0042 lines 1-12 "available bandwidth value of the access link" and section 0043 lines 1-10 "access link....Radio Link Protocol...GSM") that the bit transfer session (see section 0041 lines 5-11 "packet exchange connection at said link") is allowed to use (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0060 lines 1-11 "bandwidth value...bandwidth currently available...to the connection") has changed (see section 0076 lines 1-18 "determine window...fastest possible rate....")

For claim 3, Reiner discloses the network entity (see section 0054 lines 1-14 "bandwidth values...to the receiver...to the sender") receiving (see section 0054 lines 1-14 "bandwidth values...sent...to the receiver...to the sender") said information (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values..." from the radio (see section 0043 lines 1-10 "access link....Radio Link Protocol...GSM" and section 0044 lines 5-8 "radio...cellular telephone") network node (see section 0054 "have the routers along the connection add these

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bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) at predetermined intervals (see section 0035 “several times during the sending” and section 0076 lines 1-18 “measuring and updating...given time period”)

For claim 4, Reiner discloses said network entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0052 lines 1-10 “personal computer...server”) being (see section 0057 lines 1-12 “one or both partners in the connection”) the application server (see section 0052 lines 4-7 “server”).

For claim 8, Reiner discloses characterised by said transport protocol being TCP (see section 0047 lines 5-10 “TCP” and section 0047 lines 5-10 “TCP...flow control”).

For claim 9, Reiner discloses said at least one parameter being the TCP window size (see section 0037 lines 1-8 “window size ....TCP” and section 0047 lines 1-13 “TCP...flow control...bottleneck window.. congestion window...advertised window”)

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For claim 11, Reiner discloses further comprising updating said at least one parameter (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” such that the bandwidth on the wireless link (see section 0043 lines 1-10 “access link....Radio Link Protocol...GSM” and section 0044 lines 5-8 “radio...cellular telephone”) that is utilized by the bit transfer (see section 0015 lines 1-4 “data flow...stream oriented”) session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) increases or decreases (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0007 lines 1-10 and section 0008 lines 1-5 “...sender is not allowed to have more...window....overflow”; adjusting window size changes the amount sent/received, thus it changes the available bandwidth”)

For claim 15, Reiner discloses an apparatus (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0057 lines 1-11

“incorporated ...in one or both of the partners”), included in a network entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0057 lines 1-11 “incorporated ...in one or both of the partners”), for Controlling (see section 0036 lines 2-6 “sliding window flow control...is calculated” and see Figure 1, st10-st30 and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) transmission (see section 0004 line 1 “transmission of data”) of data bits (see section 0030 section 0005 lines 1-8 “bytes”) in a bit transfer session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) for transmitting data information (see section 0004 line 1 “transmission of data”) from an application server (see section 0052 lines 4-7 “server”) to a client (see section 0052 lines 4-7 “personal computer” and section 0043 lines 1-7 “personal computer”) , said bit transfer session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) involving bit transfer (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange

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connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) over a wireless communications link (section 0042 lines 1-12 “available bandwidth value of the access link” and section 0043 lines 1-10 “access link....Radio Link Protocol...GSM”) by means of a transport protocol (see section 0047 lines 5-10 “TCP” and section 0037 lines 1-8 “window size ....TCP” and section 0047 lines 1-13 “TCP...flow control...bottleneck window.. congestion window...advertised window”) with a flow control mechanism (see section 0047 lines 5-10 “TCP...flow control”), the apparatus (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0057 lines 1-11 “incorporated ...in one or both of the partners”) comprising:

reception means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) receiving information (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) continuously (see section 0035 lines 1-6 “bandwidth value...determined...several times” and section 0097 lines 1-22 “...over intervals” and section 0076 “periodically”) throughout said session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) from network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the

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receiver....acknowledgment packets being returned to the sender”) about the bandwidth use (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0060 lines 1-11 “bandwidth value...bandwidth currently available...to the connection”; section 0054) on the entire wireless link link (section 0042 lines 1-12 “available bandwidth value of the access link” and section 0043 lines 1-10 “access link....Radio Link Protocol...GSM”; section 0054) that the bit transfer session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) currently is allowed to use (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0060 lines 1-11 “bandwidth value...bandwidth currently available...to the connection”; section 0054), where the reception means (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) is separate from the network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) and comprises at least one of the application server and the client (see section 0052 lines 4-7 “server...computer”); the router determines the bandwidth said bit transfer session is allowed to use over the wireless link (see section 0019, 0054; next router from wireless device determines the available bandwidth); and

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and parameter setting means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” for updating (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” at least one parameter (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” relating to the flow control mechanism (see section 0036 lines 1-7 through section 0037 “window size...control window” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” of the transport protocol (see section 0037 lines 1-8 “window size ....TCP” and section 0047 lines 1-13 “TCP...flow control...bottleneck window.. congestion window...advertised window”) in response to said received information (see section 0036 lines 1-7 “window size is

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calculated...dependence on said bandwidths” and section 0055 lines 1-11  
“sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...”), so as to control the transmission rate (see section 0055 lines 1-11  
“sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) of the session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider” and section 0057 lines 1-11 “partners in the connection”) in accordance with said received (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) information (see section 0055 lines 1-11  
“sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”).

For claim 16, Reiner discloses reception means (see section 0043 lines 1-16  
“personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) receiving said information (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0042 lines 1-12 “available



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bandwidth value of the access link” and section 0055 lines 1-11

“sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” from a network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) each time the bandwidth on the wireless link (section 0042 lines 1-12 “available bandwidth value of the access link” and section 0043 lines 1-10 “access link....Radio Link Protocol...GSM”) that the bit transfer session (see section 0041 lines 5-11 “packet exchange connection at said link”) is allowed to use (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0060 lines 1-11 “bandwidth value...bandwidth currently available...to the connection”; section 0054) has changed (see section 0076 lines 1-18 “determine window...fastest possible rate....”)

For claim 17, Reiner discloses the reception means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) arranged to receive (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) said information (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0042 lines 1-12 “available bandwidth value of the access link” and section 0055 lines 1-11

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“sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” from the network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) at predetermined intervals (see section 0035 “several times during the sending” and section 0076 lines 1-18 “measuring and updating...given time period”)

For claim 18, Reiner discloses said reception means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) and parameter setting (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” are included in the (see section 0057 lines 1-12 “one or both partners in the connection”) the application server (see section 0052 lines 4-7 “server”).

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For claim 22, Reiner discloses characterised by said transport protocol being TCP (see section 0047 lines 5-10 "TCP" and section 0047 lines 5-10 "TCP...flow control").

For claim 23, Reiner discloses said at least one parameter being the TCP window size (see section 0037 lines 1-8 "window size ....TCP" and section 0047 lines 1-13 "TCP...flow control...bottleneck window.. congestion window...advertised window")

For claim 25, Reiner discloses update said at least one parameter (see section 0036 lines 1-7 through 0037 "window size is calculated...dependence on said bandwidths" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...") such that the bandwidth on the wireless link (see section 0043 lines 1-10 "access link....Radio Link Protocol...GSM" and section 0044 lines 5-8 "radio...cellular telephone") that is utilized by the bit transfer (see section 0015 lines 1-4 "data flow...stream oriented") session (see section 0015 lines 1-4 "data flow...stream oriented" and abstract (57) "sender to a receiver in a packet exchange connection" and section 0043 lines 1-10 "packet exchange ...personal computer...modem link..internet provider") increases or decreases (see section 0036 lines 1-7 through 0037 "window size is calculated...dependence on said bandwidths" and section 0055

lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0007 lines 1-10 and section 0008 lines 1-5 “...sender is not allowed to have more...window....overflow”; adjusting window size changes the amount sent/received, thus it changes the available bandwidth”).

For claim 28, Reiner discloses a system (see section 0036 lines 2-6 “sliding window flow control....is calculated” and see Figure 1, st10-st30 and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled” and section 0043 lines 1-15 “personal computer...access link...modem link” and section 0054 lines 1-13 “sender...receiver”) for controlling (see section 0036 lines 2-6 “sliding window flow control....is calculated” and see Figure 1, st10-st30 and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) transmission of data (see section 0004 line 1 “transmission of data”) bits (see section 0030 section 0005 lines 1-8 “bytes”) in a bit transfer (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange

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connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) involving bit transfer (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) over a wireless communications link (see section 0043 lines 1-10 “access link....Radio Link Protocol...GSM” and section 0044 lines 5-8 “radio...cellular telephone”) by means of a transport protocol (see section 0047 lines 5-10 “TCP”) with a flow control mechanism (see section 0047 lines 5-10 “TCP...flow control”), the system (see section 0036 lines 2-6 “sliding window flow control....is calculated” and see Figure 1, st10-st30 and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) comprising an apparatus (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) further comprising: reception means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the

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receiver...to the sender”) receiving information (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) continuously (see section 0035 lines 1-6 “bandwidth value...determined...several times” and section 0097 lines 1-22 “...over intervals” and section 0076 “periodically”) throughout said session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) from a network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) about the bandwidth use (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0060 lines 1-11 “bandwidth value...bandwidth currently available...to the connection”) on the entire wireless link (section 0042 lines 1-12 “available bandwidth value of the access link” and section 0043 lines 1-10 “access link....Radio Link Protocol...GSM”) that the bit transfer session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) currently is allowed to use (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0060 lines 1-11 “bandwidth value...bandwidth currently available...to the connection”; section 0054), where

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the reception means entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) is separate from the network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) and comprises at least one of the application server and the client (see section 0052 lines 4-7 “server...computer”);

the router determines the bandwidth said bit transfer session is allowed to use over the wireless link (see section 0019, 0054; next router from wireless device determines the available bandwidth); and

and parameter setting means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” for updating (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” at least one parameter (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth

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values....using sliding window based flow control ...determining a window value from ...bandwidth values...) relating to the flow control mechanism (see section 0036 lines 1-7 through section 0037 “window size...control window” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...”) of the transport protocol (see section 0037 lines 1-8 “window size ....TCP” and section 0047 lines 1-13 “TCP...flow control...bottleneck window.. congestion window...advertised window”) in response to said received information (see section 0036 lines 1-7 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...”), so as to control the transmission rate (see section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”) of the session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider” and section 0057 lines 1-11 “partners in the connection”) in accordance with said received (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) information (see section 0055 lines 1-11



“sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled”).

a network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) , arranged to send (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) information (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 “available bandwidth value of the access link” and section 0055 lines 1-11

“sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” continuously (see section 0035 lines 1-6 “bandwidth value...determined...several times” and section 0097 lines 1-22 "...over intervals" and section 0076 "periodically"), throughout (see section 0035 lines 1-6 “bandwidth value...determined...several times” and section 0097 lines 1-22 "...over intervals" and section 0076 "periodically") said session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”), about the bandwidth (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0060 lines 1-11 “bandwidth

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value...bandwidth currently available...to the connection”) on the wireless link link (section 0042 lines 1-12 “available bandwidth value of the access link” and section 0043 lines 1-10 “access link...Radio Link Protocol...GSM”) that the bit transfer session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) currently is allowed to use (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0060 lines 1-11 “bandwidth value...bandwidth currently available...to the connection”) to the reception means (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) of said apparatus (see section 0043 lines 1-16 “personal computer...access link is a modem link” and see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”).

For claim 29, Reiner discloses said system (see section 0036 lines 2-6 “sliding window flow control....is calculated” and see Figure 1, st10-st30 and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values..congestion can be minimized..using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0056 “flow of data is controlled” and section 0043 lines 1-15 “personal computer...access link...modem link” and section 0054 lines 1-13 “sender...receiver”) further

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includes a storing unit (see section 0052 "personal computer...server" and section 0043 lines 1-15 "personal computer"), in that the network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender") is arranged to send (see section 0054 lines 1-14 "bandwidth values...sent...to the receiver...to the sender") said information (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...") to said apparatus (see section 0043 lines 1-16 "personal computer...access link is a modem link" and see section 0054 lines 1-14 "bandwidth values...to the receiver...to the sender") via said storing unit and in that said storing unit (see section 0052 "personal computer...server" and section 0043 lines 1-15 "personal computer") is arranged to relay (see section 0054 lines 1-14 "bandwidth values...sent...to the receiver...to the sender") said information (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...") from said radio (see section 0043 lines 1-10 "access

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link....Radio Link Protocol...GSM" and section 0044 lines 5-8 "radio...cellular telephone") network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender") to said apparatus (see section 0043 lines 1-16 "personal computer...access link is a modem link" and see section 0054 lines 1-14 "bandwidth values...to the receiver...to the sender").

For claim 30, Reiner discloses receiving said information (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...") from a network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender") each time the bandwidth on the wireless link (section 0042 lines 1-12 "available bandwidth value of the access link" and section 0043 lines 1-10 "access link....Radio Link Protocol...GSM") that the bit transfer session (see section 0041 lines 5-11 " packet exchange connection at said link") is allowed to use (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0060 lines 1-11

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“bandwidth value...bandwidth currently available...to the connection”) has changed (see section 0076 lines 1-18 “determine window...fastest possible rate....”)

For claim 31 ,Reiner discloses the network entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender”) receiving (see section 0054 lines 1-14 “bandwidth values...sent...to the receiver...to the sender”) said information (see section 0041 lines 5-11 “actual bandwidth value available to the packet exchange connection at said link” and section 0042 lines 1-12 “available bandwidth value of the access link” and section 0055 lines 1-11

“sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” from the network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”) at predetermined intervals (see section 0035 “several times during the sending” and section 0076 lines 1-18 “measuring and updating...given time period”)

For claim 32, Reiner discloses said network entity (see section 0054 lines 1-14 “bandwidth values...to the receiver...to the sender” and section 0052 lines 1-10 “personal computer...server”) being (see section 0057 lines 1-12 “one or both partners in the connection”) the application server (see section 0052 lines 4-7 “server”).

For claim 36, Reiner discloses characterised by said transport protocol being TCP (see section 0047 lines 5-10 "TCP" and section 0047 lines 5-10 "TCP...flow control").

For claim 37, Reiner discloses said at least one parameter being the TCP window size (see section 0037 lines 1-8 "window size ....TCP" and section 0047 lines 1-13 "TCP...flow control...bottleneck window.. congestion window...advertised window")

For claim 39, Reiner discloses parameter setting means (see section 0043 lines 1-16 "personal computer...access link is a modem link" and see section 0054 lines 1-14 "bandwidth values...to the receiver...to the sender" and section 0036 lines 1-7 through 0037 "window size is calculated...dependence on said bandwidths" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...") is arranged to update said at least one parameter (see section 0036 lines 1-7 through 0037 "window size is calculated...dependence on said bandwidths" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...") such that the bandwidth on the wireless link (see section 0043 lines 1-10 "access link....Radio Link Protocol...GSM" and section 0044 lines 5-8

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“radio...cellular telephone”) that is utilized by the bit transfer (see section 0015 lines 1-4 “data flow...stream oriented”) session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) increases or decreases (see section 0036 lines 1-7 through 0037 “window size is calculated...dependence on said bandwidths” and section 0055 lines 1-11 “sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values...” and section 0007 lines 1-10 and section 0008 lines 1-5 “...sender is not allowed to have more...window....overflow”; adjusting window size changes the amount sent/received, thus it changes the available bandwidth”).

**Reiner is not explicit about the following:**

For claims 1, 15, and 28 a network node being a radio resource managing unit; over another connection separate from the bit transfer session.

As regarding claim 12, 26,40, the radio resource managing unit being a radio network controller.

Turina from the same or similar field of endeavor discloses the following:

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For claim 1, 15, and 28, Turina discloses a network node being a radio resource managing unit (see section 0059; the RNC is a router that is next to wireless device)

As regarding claim 12, 26,40, Turina discloses the radio resource managing unit being a radio network controller ((see section 0059; the RNC is a router that is next to wireless device)

Jenq from the same or similar field of endeavor discloses the following:

For claim 1, and similarly 15, 28, Jenq discloses over another connection separate from the bit transfer session (see section 0037; acknowledgement messages are sent on a different connection).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Reiner by using the above recited features, as taught by Turina, in order to achieve a transparent link between the mobile switching apparatus pool and the group of access nodes such that from the access node point of view the router apparatus acts like a mobile switching apparatus (with the exception that signaling messages--e.g. connectionless signaling messages--may be altered) and from the mobile switching apparatus point of view the router apparatus acts like an access node meaning that there exists no impact on the core network and access network architecture. It would have been obvious that the RNC has a



router that is next to the wireless mobile station, therefore the RNC (next router) would determine the available bandwidth as disclosed by Reiner in section 0019.

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Reiner and Turina by using the above recited features, as taught by Jenq, in order to provide a protection switching technique that can be employed to enhance the level of survivability of a communications network in the event of a fault, which would make more efficient use of resources in the communications network and that reduces the loss of data traffic carried by the network (see Jenq para. 0010)

2. Claim 5, 6, 19, 20, 33,34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiner (EP0948168), Turina et al (US 2005/0054348) and Jenq (US 2003/0063560) as applied to claims 1/15/28 above, further in view of Wolfe et al (US 6,907,455).

For claim 5,6,19,20,33,34,Reiner, Cooper, and Jenq describes the claimed invention above.

As regarding claim 6,20,34, Reiner discloses said receiver (see section 0004 lines 1-10 "receiver") sending acknowledgements (see section 0004 lines 1-10 "Each segment....acknowledged") of packets received (see section 0004 lines 1-10 "segment...receipt") from the application server (see section 0052 lines 4-7 "server") during said bit transfer session (see section 0015 lines 1-4 "data

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flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) and by said acknowledgements (see section 0004 lines 1-10 “Each segment....acknowledged”) being dependent on said received information from the radio (see section 0043 lines 1-10 “access link....Radio Link Protocol...GSM” and section 0044 lines 5-8 “radio...cellular telephone”) network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”).

Reiner, Turina, and Jenq are not explicit about:

As regarding claim 5, 19, 33 said bit transfer session being set up between the application server and the client via a proxy and by said network entity being the proxy.

As regarding claim 6, 20, 34 said proxy.

Wolfe from the same or similar field of endeavor discloses a communications network with the following features:

As regarding claim 5 ,19, 33 Wolfe discloses said bit transfer session (see column 4 line 1 “session” and column 5 lines 56—67 “session”) being set up (see column 5 lines 54 through column 6 line 5 “application server...activate session...proxy...telephony device” and column 6 lines 23-26 “activation of the session of..application”) between the application server (see Figure 1 64,68, “Application Server”) and the client (see Figure 1 “Clients” , 18A-F) via a proxy

(see Figure 1 “Proxy Browser”) and by said network entity (see Figure 2 “Gateway”) being the proxy (see Figure 2, “Proxy Browser”).

As regarding claim 6, 20, 34, Wolfe discloses said proxy (see column 5 lines 54 through column 6 line 5 “application server...activate session...proxy...telephony device” and column 6 lines 23-26 “activation of the session of..application”; Figure 2, “Proxy Browser”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Reiner, Turina, and Jenq by using the features, as taught by Wolfe, in order to forwarding capabilities of the client to a server and also to cache information.

3. Claim 7, 21, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiner (EP0948168), Turina et al (US 2005/0054348) and Jenq (US 2003/0063560) as applied to claims 1/15/28 above, further in view of Lee et al (US 2003/0233453).

For claim 7, 21, 35, Reiner, Cooper, and Jenq discloses the claimed invention as described above.

For claim 7, 21, 35, Reiner discloses the network entity receiving said information from the network node (see section 0054 “have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender”)

Reiner, Turina, and Jenq are silent about:

For claim 7, 21, 35, via the client

Lee from the same or similar field of endeavor discloses the following features:

For claim 7, 21, 35, Lee discloses via the client (see section 0023

“clients...send...resource..information”)

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify / combine the features of Reiner, Turina, and Jenq by using the above recited features, as taught by Lee, in order to provide improved network topology probing that overcome the problems of the prior art (for example not supporting IPV6) (see Lee sections 0004-10)

4. Claim 10, 24, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiner (EP0948168), Turina et al (US 2005/0054348) and Jenq (US 2003/0063560) as applied to claim 1/ 15/28 above, further in view of Walding (US 6,031,845).

For claim 10, 24, 38, Reiner, Cooper, and Jenq discloses the claimed invention as described above.

Furthermore, for claim 10, 24,38, Reiner discloses the data to be transmitted (see section 0004 line 1 “transmission of data”) during the bit transfer (see section 0015 lines 1-4 “data flow...stream oriented”) session (see section 0015 lines 1-4 “data flow...stream oriented” and abstract (57) “sender to a receiver in a packet exchange connection” and section 0043 lines 1-10 “packet exchange ...personal computer...modem link..internet provider”) and said received information information (see section 0041 lines 5-11 “actual bandwidth value

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available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values..." from the network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender").

Furthermore, for claim 10, 24,38, Reiner discloses the data to be transmitted (see section 0004 line 1 "transmission of data") during the bit transfer (see section 0015 lines 1-4 "data flow...stream oriented") session (see section 0015 lines 1-4 "data flow...stream oriented" and abstract (57) "sender to a receiver in a packet exchange connection" and section 0043 lines 1-10 "packet exchange ...personal computer...modem link..internet provider") and said received information information (see section 0041 lines 5-11 "actual bandwidth value available to the packet exchange connection at said link" and section 0042 lines 1-12 "available bandwidth value of the access link" and section 0055 lines 1-11 "sender...automatically taking into account...bandwidth values....using sliding window based flow control ...determining a window value from ...bandwidth values..." from the network node (see section 0054 "have the routers along the connection add these bandwidth values to packets being sent to the receiver....acknowledgment packets being returned to the sender").

Reiner, Turina, and Jenq are silent about:

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For claim 10 and similarly 24 Further comprising the step of transforming (see column 4 lines 1-5 “compress call data”) the data (see column 4 lines 1-5 “data”) to be transmitted (see column 4 lines 1-5 “transmission”) in response to said information regarding bandwidth (see column 4 lines 1-5 “within the bandwidth allocated to a call”).

Walding from the same or similar field of endeavor discloses communication system with the following features:

As regarding claim 10 and 34, further comprising the step of transforming (see column 4 lines 1-5 “compress call data”) the data (see column 4 lines 1-5 “data”) to be transmitted (see column 4 lines 1-5 “transmission”) in response to said information regarding bandwidth (see column 4 lines 1-5 “within the bandwidth allocated to a call”).

As regarding claim 24, further comprising means for transforming (see column 4 lines 1-5 “compress call data”) the data (see column 4 lines 1-5 “data”) to be transmitted (see column 4 lines 1-5 “transmission”) in response to said information regarding bandwidth (see column 4 lines 1-5 “within the bandwidth allocated to a call”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Reiner, Turina, and Jenq by using the features, as taught by Walding, in order to provide increase the number of items of telecommunications equipment supported by a single subscriber terminal

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, which can no be accomplished merely by employing compression techniques on the data

produced by the items of telecommunications equipment and to minimize bandwidth utilization and increase link capacity (see Walding col. 2).

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5. Claim 13, 27, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reiner (EP0948168), Turina et al (US 2005/0054348) and Jenq (US 2003/0063560) as applied to claims 1/15/28 above, further in view of Holma et al (US 2002/0136192).

For claim 13,27 ,41 Reiner, Turina, and Jenq discloses the claimed invention above.

Reiner, Turina, and Jenq are silent about:

As regarding claim 13,27,41, the radio resource managing unit being a base station controller

Holma from the same or similar field of endeavor discloses a radio system with the following features:

As regarding claim 13,27,41, the radio resource managing unit (see section 0023 “base station controller”) being a base station controller (see section 0023 “base station controller”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the system of Reiner, Turina, and Jenq by using the features, as

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taught by Holma, in order to optimally implement power control of wireless component (see Holma section 0008).

### ***Response to Arguments***

Applicant's arguments filed 11/15/2010 have been fully considered but they are not persuasive.

For claim 1 and similarly the remaining indep. claims, the applicant states:

“Reiner's routers are located along the link and are used to add bandwidth values to packets traveling along the link, the routers only have knowledge of the bandwidth of the link between the sender and the router (e.g., in-bound link bandwidth information). The router has no knowledge of the bandwidth of the entire link between the sender and receiver “.

The above argument is used to contrast the difference between Reiner's teachings and the claimed language. The examiner can not agree. Reiner discloses in sections 0041-42 that the available bandwidth of the access link is messaged. The access link is the last link between an endpoint of the packet exchange (ie. sender or receiver) and a next node / router in the path. As explained in section 0043 of Reiner this endpoint and associated access link can be implemented via a wireless connection. There for the available bandwidth of the access link (i.e. a wireless link) that is associated with the sender / receiver is determined and transmitted. The applicant states “The router has no knowledge of the bandwidth of the entire link between the sender and receiver “. Even if this was true, the claim does not require that the bandwidth of the **entire link between the sender and receiver** is known / sent. The claim merely states "bandwidth on the



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entire wireless link". As explained above, the examiner believes that Reiner discloses such features as described previously.

The applicant further argues

"One with skill in the art would not even expect the cited references to disclose, teach, or even suggest "receiving information, over another connection separate from the bit transfer session ... about the bandwidth on the entire wireless link that the bit transfer session currently is allowed to use...," as recited in the independent claims because the location of Reiner's routers along the link provides an incomplete view of the total available bandwidth, which fails to account for the unpredictable nature of wireless links (See e.g., page 1, lines 25-29 of the present specification: "The bandwidth that is available for a radio connection in a ...."

Reiner further disclose that this available bandwidth information of the access link (wireless link) is sent to the receiver / sender along network nodes / routers. Therefore, once we have a network with an RNC (Turina) which is a router and is the closest to an endpoint (mobile unit) this RNC would determine such value or at least receive and forward this value to an endpoint. The examiner takes the stance that either teaching would correspond to the a network entity (i.e. wireless receiver or sender) receiving information from a resource managing unit (RNC) about the bandwidth on the entire wireless link (wireless link associated with a sender or receiver). For the above reasons the argument has been found not persuasive.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KENAN CEHIC whose telephone number is (571)270-3120. The examiner can normally be reached on Monday through Friday 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KWANG BIN YAO can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kenan Cehic/

Examiner, Art Unit 2473

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2473